

Amendments to the Claims:

This Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

1-98 (Cancelled).

99. (New) A method of forming a soldering iron tip, comprising:

providing a copper or copper alloy core having a base portion and a forward extension portion, the forward tip portion having a tip end;

applying Ag particles to at least one of an inside surface of a solder tip cap and the forward tip portion;

after the applying, fitting the solder tip cap on the forward tip portion; and

after the fitting, brazing the cap to the forward tip portion.

100. (New) The method of claim 99 wherein the applying Ag particles includes applying the particles in a paste which includes alcohol.

101. (New) The method of claim 100 wherein the applying includes each of the Ag particles having a size of between 0.1 μm and 50 μm .

102. (New) The method of claim 100 where the applying includes brushing the paste onto the inside surface and the forward tip portion.

103. (New) The method of claim 99 wherein the brazing is in a furnace.

104. (New) The method of claim 103 wherein the furnace is filled with N_2 gas and has a brazing temperature of 700°C.

105. (New) The method of claim 99 further comprising before the brazing and the fitting, mounting a brazing filler metal ring to the forward extension portion.

106. (New) The method of claim 105 wherein the ring is a BAg-7 ring.

107. (New) The method of claim 99 further comprising applying flux to a joint between the cap and the forward extension portion.
108. (New) The method of claim 107 wherein the flux applying is before the brazing.
109. (New) The method of claim 107 wherein the flux is a silver brazing flux.
110. (New) The method of claim 99 wherein the brazing is in a non-oxidation atmosphere.
111. (New) The method of claim 99 wherein the cap is an iron cap.
112. (New) The method of claim 99 wherein the forward extension portion has a longitudinal through-passageway, and the soldering iron tip defines a desoldering iron tip.
113. (New) A soldering iron tip formed by the method of claim 99.
114. (New) A method of forming a soldering iron tip, comprising:
- applying a paste of Ag particles to at least one of an inside surface of a soldering iron tip cap or a forward tip of an extension member of a soldering iron tip core;
- after the applying, inserting the cap on the forward tip end; and
- after the applying, subjecting the cap and the extension member to a brazing temperature.
115. (New) The method of claim 114 wherein the applying includes applying approximately 500 grams of Ag particles.
116. (New) The method of claim 114 wherein the cap is a metal-injection-molded cap.
117. (New) The method of claim 114 wherein the cap is an iron cap.
118. (New) The method of claim 114 wherein the diameters of the Ag particles are between 0.1 μm and 50 μm .
119. (New) The method of claim 114 further comprising before the subjecting, mounting a brazing filler metal ring on the extension member.

120. (New) The method of claim 119 wherein the mounting is before the inserting.
121. (New) The method of claim 119 wherein the mounting is against an abutment surface of the extension member.
122. (New) The method of claim 121 wherein the abutment surface extends out perpendicular to a longitudinal axis of the extension member.
123. (New) The method of claim 121 wherein the abutment surface extends out an angle from a longitudinal axis of the extension member away from the forward tip.
124. (New) The method of claim 119 wherein the ring is a silver braze ring.
125. (New) The method of claim 119 further comprising after the mounting, applying flux over the ring.
126. (New) The method of claim 125 wherein the applying flux is before the subjecting.
127. (New) The method of claim 125 wherein the applying flux is after the subjecting.
128. (New) The method of claim 125 wherein the flux is AWS 3A type or AWS 3B type flux.
129. (New) The method of claim 114 wherein the subjecting is in a furnace and at approximately 700° C for approximately 10 minutes.
130. (New) The method of claim 129 where the furnace is filled with at least one of the gases selected from the group consisting essentially of N₂, H₂, and Ar gas.
131. (New) The method of claim 114 further comprising applying flux to a joint between the cap and the extension member.
132. (New) The method of claim 131 wherein the flux is a silver brazing flux.
133. (New) The method of claim 114 wherein the applying includes applying the paste to both the inside surface and the forward tip end.

134. (New) The method of claim 114 further comprising applying flux to the joint between the cap and the extension member, and the subjecting includes heating the cap and the extension member in an inert atmosphere.

135. (New) The method of claim 114 wherein the inserting includes pressure fitting the cap on the forward tip end.

136. (New) The method of claim 114 wherein the cap is an iron cap.

137. (New) A soldering iron tip formed by the method of claim 114.

138. (New) A soldering iron tip, comprising:

a copper or copper alloy core having a base portion and a forward extension portion; and

an iron cap brazed to a tip end of the forward tip portion with a silver particle layer sandwiched between the cap and the forward extension portion.

139. (New) The soldering iron tip of claim 138 further comprising silver-based brazing filler in the joint between the end of the cap and the forward extension portion.

140. (New) The soldering iron tip of claim 138 wherein the soldering iron tip defines a solder suction tip and the forward extension portion has a suction through-passageway.

141. (New) The soldering iron tip of claim 138 wherein the cap is a metal-injection-molded cap.

142. (New) The soldering iron tip of claim 138 further comprising a brazing filler metal ring on and brazed to the extension member between an abutment surface of the extension member and a proximal end of the cap.

143. (New) The soldering iron tip of claim 142 wherein the abutment surface is perpendicular to a longitudinal axis of the extension member.

144. (New) The soldering iron tip of claim 142 wherein the abutment surface is at an angle of approximately 5 to 10 degrees relative to a longitudinal axis of the extension member and away from the forward tip.
145. (New) The soldering iron tip of claim 138 further comprising a top coating not wettable by solder on the base portion.
146. (New) The soldering iron tip of claim 145 wherein the top coating is a ceramic material, cermet material or metal.
147. (New) The soldering iron tip of claim 145 further comprising an undercoating on the core and underneath the top coating.
148. (New) The soldering iron tip of claim 138 wherein the core includes a rearwardly-opening cavity.
149. (New) The soldering iron tip of claim 148 further comprising an aluminum oxide film in the cavity.
150. (New) The soldering iron tip of claim 148 further comprising an Ag-Al-Cu alloy coating layer in the cavity.